# EXHIBIT 14

Renal & Urology News

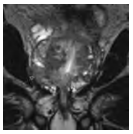
PROSTATE CANCER ADVISOR



April 14, 2016

# Multiple Comorbidities Predict Higher-Risk Prostate Cancer

Jody A. Charnow



**Slideshow**

Adjuvant Radiation Therapy for Patients with High-Risk Pathology at Prostatectomy

A 64-year-old man with history of elevated PSA (8.5 ng/mL) and previous negative prostate biopsies underwent multiparametric prostate magnetic resonance imaging (MRI). PIRADS 4 and 5 lesions were identified in the transitional and peripheral zones with the latter lesion exhibiting...

Comorbidity burden is associated with pathologic upgrading and up staging in men with clinically low-risk prostate cancer (PCa) eligible for active surveillance, new findings suggest.

Prostate cancer patients with 2 or more comorbid diseases are more likely to have their cancer upgraded and up staged at RP.

Using the National Cancer Data Base (NCDB), a team led by Robert Abouassaly, MD, of University Hospitals Case Medical Center in Cleveland, studied 29,447 men with low-risk PCa who underwent radical prostatectomy (RP) from 2010 to 2011. Of these, 449 (1.5%) had more than 1 comorbidity. At RP, 44% of cases were upgraded/up staged (UGUS). The researchers used the Charlson comorbidity index (CCI) to evaluate comorbidity burden.

In multivariate analysis, men with a Charlson score of 2 or higher had a significant 1.4 times increased odds of UGUS to higher-risk disease, Dr. Abouassaly and his colleagues reported in *The Journal of Urology* (2016;195:919-924). Age, race, PSA level, and percentage of positive biopsy cores also were significant predictors of UGUS. Men aged 70 years and older had 32% increased odds of URUS compared with those younger than 70 years. Non-whites had 12% increased odds versus whites. A PSA level of 4 ng/mL or higher was associated with 66% increased odds compared with lower PSA levels. Patients with 33%–67% and greater than 67% positive cores had 51% and 50% increased odds, respectively, compared with those who had less than 33% positive cores.

**Today's top picks on the Haymarket Medical Network**

Women More Frequently Report Pain, Higher Pain Scores Compared With Men

Black Men With Metastatic Prostate Cancer More Frequently Refuse Chemotherapy

High Posterior Vitreous Separation Height Associated With Macular Hole Progression

CONTINUE READING

After further adjustment for age, race, PSA level and core involvement, only white men younger than 70 years with comorbidities demonstrated significant UGUS. In this group, men with a Charlson score of 2 or more had a significant 31% increased risk of UGUS versus those with a score 1 or less.

The investigators said their results suggest that comorbidity burden may be another variable to consider when assessing PCa risk, "and that incorporating comorbidity assessment into current practice may improve the accuracy of risk stratification in men eligible for active surveillance."

They pointed out, however, that as higher comorbidity burden also predicts non-cancer-related deaths, UGUS may not be clinically significant for all PCa patients with comorbidities, especially those with a Charlson score of 3 or higher, who are unlikely to benefit from aggressive treatment.

In a discussion of study limitations, Dr Abouassaly's group noted that due to selection bias favoring healthier patients for RP, the prevalence of comorbidities in their study population was about 15% lower than in the general population with PCa in the United States. Because men with comorbidities may be less likely to undergo surgery, other factors not captured in the NCDB, such as positive family history, PSA velocity or density, and lower urinary tract symptoms, may have influenced the use of RP and the risk of UGUS in patients selected for surgery.

The researchers also noted that CCI was the only variable available to quantify comorbidity burden. "Therefore, we were unable to identify a specific disease or disease process associated with the UGUS effect."

**From the May 01, 2016 Issue of Renal and Urology News**

TOPICS: PROSTATE CANCER

Back to Top ↑